DISTRIBUTION

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DISTRIBUTION

Nurse Server

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OBJECTIVES

Following training, the employee will be able to:

1. Discuss the role in supply support to user areas for patient care needs.

2. Identify and discuss the five main types of distribution methods utilized to ensure that medical supplies and equipment are delivered to the right place, in the right condition, at the right time.

3. Identify the types of specialty carts and their contents and uses.

4. Identify and discuss the different types of delivery methods and equipment.

5. Describe the procedures for delivery of clean and sterile patient care supplies to the user areas.

6. Describe the importance of equipment tracking.

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DISTRIBUTION

1. INTRODUCTION TO DISTRIBUTION

a. The distribution area is the center of the Supply, Processing and Distribution section. Its purpose is to stock, maintain, and distribute sterile and clean medical supplies and equipment to the user areas for patient care needs.

b. Most items are sent to the user areas via the dumb waiter, pneumatic tubes, or hand-carried. All stat items are hand-carried to ensure that these items are delivered promptly to the area in the critical time of need.

c. Medical supply technicians have the responsibility of stocking all user areas with patient care supplies and equipment. Supplies are stocked on a daily basis in supply closets or nurse-servers on each unit. Stocking of supplies in the nurse-servers provides the nursing staff with time to provide optimum care for the patients.

d. When clean and sterile supplies are needed in the user areas of the healthcare facility, they must be transferred from the SPD department to the point of use. This chapter will explain five main distribution methods that SPD departments may utilize to ensure the right product is delivered, in the right condition, at the right time.

2. TYPES OF DISTRIBUTION

There are five main types of distribution systems: **demand**, **par-level restocking**, **exchange cart**, **case cart**, and **specialty carts**. The type of system used depends on the services the healthcare facility provides, its size, physical design, age, resources, and mission. SPD management may periodically reevaluate their distribution systems in order to meet the current demands placed on the facility (i.e., census, finances). The important considerations in evaluating distribution systems are whether or not it provides information on future supply needs, the timeliness and accuracy with which supplies can be made available to the user, and how the system provides for control and documentation of inventory movement. It is important that the technicians be familiar with the characteristics, advantages, and disadvantages of each of the types of distribution systems. This way they can better understand why a particular system is used at their medical center, and how they can help make their distribution system as cost-effective, reliable, and efficient as possible.

3. DEMAND DISTRIBUTION SYSTEM

a. Every healthcare facility has used the demand distribution system (known also as a requisition and delivery distribution system), at one time or another. In this system, the staff of various user areas are responsible for maintaining an adequate level of supplies for use in that area. When supplies must be replenished, or an individual item

is needed, the user must prepare a requisition and request the necessary items, usually by telephone or in person. The SPD staff fills the order and delivers it to the user area by dumb waiter or in person. After delivery of the items, the requesting user is responsible for storing the items or transferring them to the point of use. This distribution system is generally carried out on a regularly scheduled basis or as necessary (needed), hence the term "**demand**" distribution system.

b. The demand distribution system is a simple process and has fulfilled supply needs for the healthcare facilities for many years. The **disadvantages** of the demand system are: the method is very labor-intensive, is generally unsuitable for high volume distribution in a large facility, and personnel in the user areas generally have patient care responsibilities and other priorities and do not have the time or the training to commit themselves to do adequate inventory control. Therefore, there is a tendency to maintain high levels of stock (hoarding) in the user area to eliminate frequent requisitioning and documentation. Maintaining excessively high inventories can be very costly to healthcare facilities.

4. PAR-LEVEL RESTOCKING DISTRIBUTION SYSTEMS

a. In this type of system an inventory or par-level is set for each stocked item used daily. These levels should be reviewed frequently and changed as necessary to reflect actual usage. The SPD technician is responsible for reviewing the levels daily as stock is being inventoried and maintained. The SPD technician should communicate with the customers in order to make necessary changes based on patient care needs. Supply closets, treatment rooms, and nurse-servers are used for storage of these supplies.

b. A typical procedure to maintain stock in the areas is to assign a technician to each area(s). The technician will inventory all supplies in the treatment rooms, supply closets, and other areas where supplies are stocked. The technician will return to the SPD department and have the inventory sheets filled by other technicians or themselves. When the supplies have been obtained, the technician then replenishes the user area with the preset "par-levels." Healthcare facilities utilizing nurse-servers for patient care supplies also use a par-level restocking system.

c. A listing of all needed supply items and levels are posted on the inside of the nurse-servers, therefore, the user and the SPD technicians will know what should be readily available at all times for patient care. The nurse-servers are stocked with supplies daily to bring supply levels up to "par" or preset levels. Nurse-servers are usually restocked from a mobile supply cart that contains all needed supplies. This cart is inventoried and restocked daily by the SPD technician. The par-level system is user friendly in that the users no longer have the time-consuming task of maintaining their own supply inventory, and inventories can be maintained at more optimum levels than in the demand system. In most healthcare facilities, this system provides an excellent means of tracking the use of patient care items.

d. The disadvantage of this system is that distribution is a timely process if the healthcare facility is large or spread over several areas. Some medical centers use a replenishment cart(s), which the SPD technician takes to each area for restocking medical supplies to par-levels. This procedure may require the technician to return to the SPD department frequently for restocking the replenishment cart(s).

5. **EXCHANGE CART SYSTEM**

a. The exchange cart system, like the par-level restocking system, has pre-set levels that have been established by the user and the SPD technician. In the exchange cart system, two identical carts are stocked with supplies. Once the levels of these carts have been established, one cart is placed in the user area and one in SPD. On a regular basis, the cart in the user area is returned to SPD and the identical (fully stocked) cart in SPD is exchanged in its place.

b. The exchange cart system is practical, flexible, dependable, easy to manage, and can be used in all healthcare facilities. This system allows for thorough documentation, good control of patient care supplies, and identification of lost stock. This distribution system can be extremely cost-effective through its control of inventory, time savings, and manpower. The disadvantages of this system are that duplication of stock and large amounts of space are needed for storage and handling of carts in the SPD distribution section. The cost to establish this system can be very expensive due to the initial purchase of the exchange carts and the additional inventory required to stock them.

6. **CASE CART SYSTEM**

a. In the case cart system, the operating room is provided with selected supplies for each surgery via a case cart system. These case carts have supplies and instruments that will be used for individual cases. The supplies and instruments for the case cart system can be provided by different methods, such as procedure cards, computer printouts, and requisition forms. The method used most frequently is the computer printout.

b. In this method, each surgery is generally assigned a computer number by SPD. When surgery receives the schedule, a computer number is assigned to each case accordingly. The surgery schedule is given to the SPD computer operator who generates a case cart listing for each surgery. These computer case cart sheets are given to the SPD technician who fills the case carts with supplies and instruments that are located in SPD. The cases are filled according to the time the surgery is scheduled for the next day. All scheduled first cases are delivered and placed in the operating room or clean corridor until time for use. All other case carts are delivered to the O.R. at the time of need. At the completion of the surgery, all contaminated supplies are placed within the soiled holding area. The carts are retrieved by SPD personnel and taken to the decontamination area for reprocessing. A major advantage for using the case cart system is the efficiency and cost savings that can be gained by concentrating

processing and inventory management expertise and equipment in SPD. Another advantage is the improvement of patient care during surgical intervention. By removing nonnursing activities, the nursing staff can spend more time on patient care and implementation of the nursing process.

c. Patient care and employee safety can be enhanced by the effective infection control that the case cart system provides. Important principles of confinement and containment can be provided by using a separate cart for each case. A closed case cart system provides for enhanced infection control. The implementation of a case cart system avoids costly duplication of effort, equipment, and inventory. When case carts are prepared for each procedure, there is better control of inventory which results in cost savings.

d. Initially, operating room personnel were concerned that SPD personnel were not trained or well prepared in the care and processing of instruments. Over the years this has changed. Healthcare facilities now offer all types of educational opportunities for SPD. Educational opportunities include on-the-job training, in-services given by product representatives and other professional staff members, and SPD certification training for employees at the VA medical centers. Continuing education training enables SPD personnel to upgrade their work practices and become more secure and confident about their jobs.

e. Once personnel are properly trained and communication between the operating room and SPD is established, the turnaround time for instrument processing is greatly reduced. An increase in instrument inventory will be required to implement the case cart system effectively.

f. One other factor to be examined before initiating a case cart system is the proximity of the O.R. to SPD. The most desirable scenario is to have the SPD department area located either adjacent to the operating room or one level above or below. If possible, a dedicated transport system between the operating room and SPD should be planned for transfer of supplies and equipment. The same procedures for traffic control and dress attire should be adhered to in SPD preparation areas as in the operating room.

7. **SPECIALTY CARTS**

a. **Specialty carts** are carts that contain supplies needed in emergency or special situations. The types of specialty carts are: **disaster**, **implant**, **crash or code carts**, and **special procedure carts**, such as **arterial line carts**, **central line carts**, **Swanz Ganz carts**, **urology carts**, and **suture carts**.

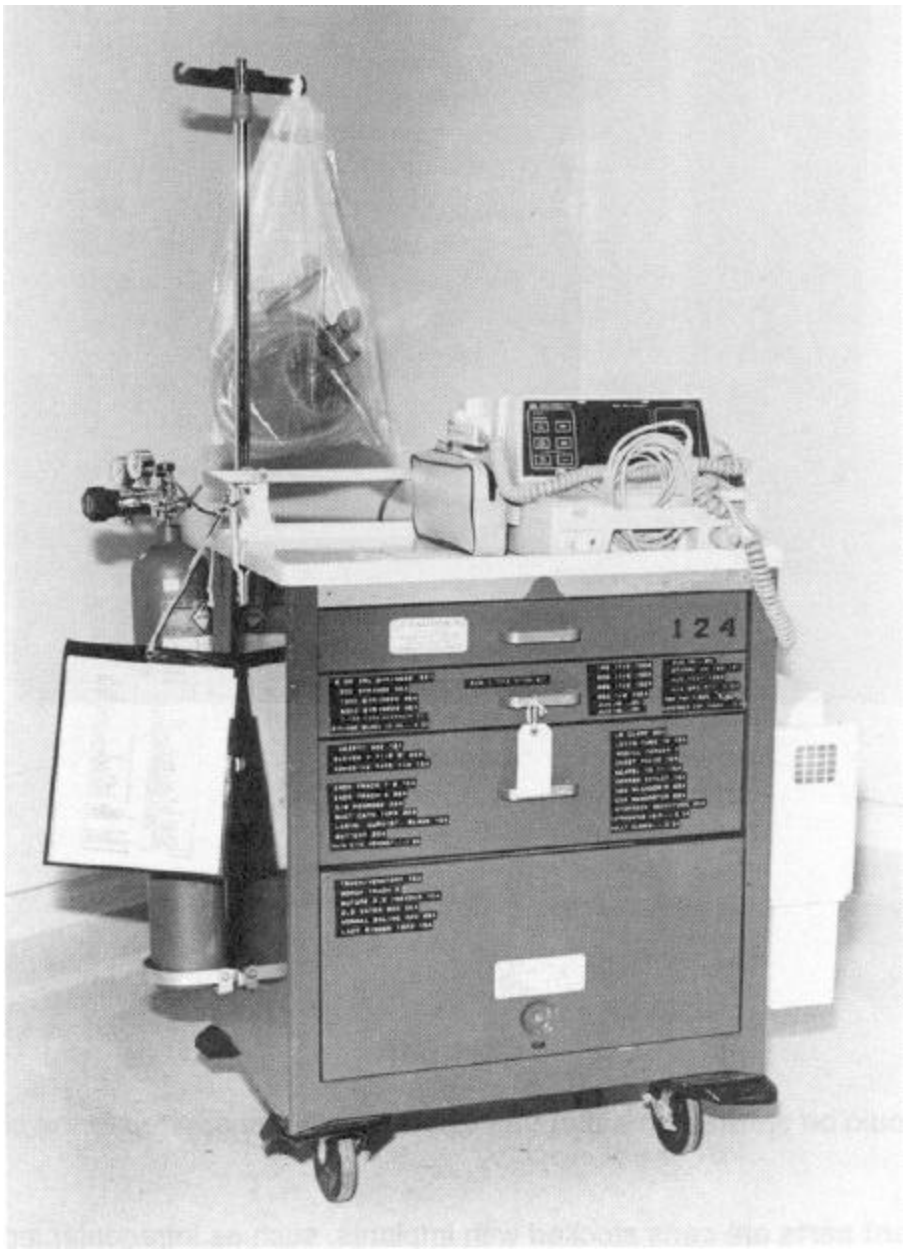
b. **Disaster carts** are stocked with medical supplies needed for use in a sudden community misfortune, such as a large traffic accident, bombing, or flood. These

Case Cart

supplies should be stocked on a cart that can be easily transported to the scene of the disaster.

c. **Implant carts** are carts stocked with implants, such as intraocular lens, vascular grafts, knee, and hip prosthesis that are transported to the operating room at the time of the specific surgery.

d. **Crash** or **code carts** are specialty carts used in emergency situations to revive victims from respiratory failure or cardiac arrest. These carts are stocked with medical supplies by SPD personnel, and drugs and intravenous solutions are stocked by the pharmacy department. **Code** or **crash carts** containing supplies and drugs are to be kept locked to secure their contents. Filled crash carts are maintained throughout medical facilities so that they can be utilized quickly during emergencies. Backup



Crash Cart

crash carts are readily available in SPD for exchange when one is used. The outside of the **code** or **crash cart** should be inspected daily by hospital personnel to ensure the security of the cart and exterior supplies and equipment. The outside of the **code** or **crash cart** will contain a listing of all supplies that are needed. The outside of the carts should be checked daily for drug expiration dates. SPD employees should read the policy and procedures manual at their VA medical centers to know their role and what is expected of them during an emergency situation.

8. DELIVERY METHODS AND EQUIPMENT

a. Several methods and types of equipment are used to deliver and store medical supplies. **Distribution carts** are used to transport and store supplies. **Dumbwaiters** and other mechanical devices are used to transport small quantities of supplies to the point of use upon request. **Nurse-servers** are small cupboards that are used to store supplies for individual patient care. In emergency situations, SPD personnel may be requested to deliver items "**stat**" ("stat" meaning **immediately**). "Stat" supplies should be delivered by the fastest method available, preferably hand delivered. Hand delivery will ensure the needed items reach the point of use as soon as possible.

b. Mechanical devices cannot ensure that "stat" items reach their destination. There could be a power failure or electrical outage. Users can obtain items directly from SPD by coming to the department. This is called **window distribution**, which is utilized by some healthcare facilities.

c. The SPD distribution area should be cleaned on a regular basis; this includes **conveyors**, **storage areas**, and **transport vehicles**. These items should be cleaned with a germicidal solution.

9. DISTRIBUTION WORK PRACTICES

SPD personnel must remember that careful handling and timely delivery of supplies are needed in the patient care area. If not, the user may lose confidence in our services. This will cause the users to hoard supplies resulting in duplication which can be costly. Patient care can be adversely affected if an item is not delivered, in the right condition, at the right time.

10. SELECTION OF ITEMS FROM INVENTORY

The distribution process begins when a request is received for supplies or equipment. These items should be handled carefully to avoid damage or contamination. The type and quantity should be verified before transporting to the point of use. All sterile items processed by SPD should be checked for **expiration date**, **external chemical indicator** (to verify the item was subjected to the sterilization process), and that the packaging is not damaged, wet, or soiled. These items should be properly labeled before being transported to the point of use. Commercially prepared sterile items

should also be inspected for expiration dates and that the package is not damaged, wet, or soiled.

11. **DELIVERY OF ITEMS TO PATIENT CARE AREAS**

During transport, clean and sterile supplies should be covered or enclosed to protect the supplies from the environmental hazards. Distribution carts, that are used for the transport of sterile supplies, should have a barrier or solid bottom shelf protecting the supplies from the wheels and floor. Items that fall on the floor during transport should not be used, they must be returned to SPD for reprocessing or disposed. Clean/sterile supplies should never be transported on the same carts or in the same containers as contaminated supplies. Each VA medical center should implement a transportation system in order to keep clean/sterile items separate from contaminated items. SPD personnel should use caution when transporting heavy carts and use proper body mechanics to avoid injury. SPD technicians should never leave distribution carts unattended. Leaving carts unattended could cause patient/employee injury, lost and theft of supplies, and contamination of sterile supplies.

12. **EQUIPMENT TRACKING**

Each VA medical center has a procedure for tracking medical equipment. Some facilities track equipment by using a peg board, cardex, alphabetical file, or a computer system. Each piece of equipment should be accounted for and safety inspections completed when required. Equipment should never be delivered to the point of use if it has not been inspected or is not functioning properly in order not to jeopardize patient care.

DISTRIBUTION TERMS

Distribution Area
Demand System (Requisition and Delivery Distribution
Par-Level Restocking Distribution System
Exchange Cart System
Case Cart System
Speciality Carts

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QUESTIONS

FILL IN THE BLANKS

1. _____ carts are used to transport and store supplies.

2. Two mechanical devices used to transport small quantities of supplies are _____ and conveyors.

3. Small cupboards used to store supplies for individual patient care are called _____.

4. In emergency situations, SPD. personnel may be requested to deliver items "stat" meaning _____.

5. "Stat" supplies should be delivered by the _____ method available, preferably hand delivered.

6. Specialty carts are carts that contain supplies needed in _____ or _____ situations.

7. The types of specialty carts are _____, _____, and_____ or _____ carts.

8. The exchange cart system has preset levels that have been established by the _____ and the _____.

9. In this system _____ carts are stocked with supplies.

10. The levels of these carts are established and _____ on a daily basis.

11. Advantages of the exchange cart system are _____, _____, and easy to _____.

12. The exchange cart system can be used in _____ healthcare facilities.

13. The exchange cart system can be _____ because of duplication of supplies.

14. One of the disadvantages of this system is the need for a _____ amount of space.

16. This system allows for thorough _____, _____ of patient care and _____ of lost stock.

TRUE/FALSE

17. Mechanical devices cannot ensure that "stat" items reach their destination.

18. When users come directly to SPD and receive supplies, this is called window distribution.

19. In all healthcare distribution sections, the area should be cleaned weekly.

20. Careful handling and timely delivery of supplies are key components in any distribution system.

21. Users never lose confidence in SPD just because supplies are in a little late getting to them.

22. In this system, a level is not set but is based on workload.

23. The user is responsible for reviewing the levels daily.

24. The computer generated inventory sheet should have the following information: item number, nomenclature, levels, and location.

25. Nurse-servers do not have a pre-set level of supplies and are stocked according to workload.

26. Nurse-servers are stocked from a mobile supply cart that contains all needed supplies.

27. With the par-level system, the user has to maintain their own supply inventory.

28. Healthcare facilities that use this system provide good means of tracking the use of patient care items.

29. The disadvantage of this system is that distribution can be slow if it is used in a large hospital.

30. With this system, the SPD technician might have to return to SPD for additional supplies.

31. Disaster carts are specialty carts used in emergency situations to revive victims from respiratory failure or cardiac arrest.

32. The drugs in the crash or code carts are stocked by warehouse personnel.

33. The code or crash carts are usually kept secure by a small lock.

34. SPD personnel should check code or crash carts daily to ensure the security of the carts.

35. SPD personnel should read the policy and procedures manual to understand their role and what is expected of them during an emergency situation involving a crash or code cart.

36. The implant cart should be used if someone suffers cardiac arrest.

37. In the event of a natural disaster, the cart that would be called for is the disaster cart.

Multiple Choice

38. What would cause a user to hoard supplies:

a. Greed
b. Taught in nursing school
c. The inability to receive supplies in a timely fashion
d. Cost may go up if not hoarded

39. Before sending supplies to users they should be checked for:

a. Expiration date
b. External chemical indicator
c. Damage
d. All of the above

40. Distribution carts that are used for the transport of sterile supplies should have:

a. Open bottom
b. Barrier or solid bottom
c. Bumpers
d. Turn signals

41. Some facilities track equipment by:

a. Using peg boards
b. Cardex
c. Computer system
d. All of the above

42. Equipment should not be delivered to the floors before it is:

a. Cleaned and inspected
b. Sterilized
c. Run through an EtO cycle
d. Asked for